

## ABSTRACT

A centrifuge apparatus for processing blood comprising a bottom spring-loaded support plate; a top support plate; an axial inlet/outlet for blood to be processed and processed components of the blood, the axial inlet/outlet being attached to the top support plate by a rotating seal assembly; a variable volume separation chamber mounted between the bottom support plate and the top support plate, the variable volume separation chamber being fluidly connected to the axial inlet/outlet; a pump fluidly connected to the axial inlet/outlet; and a rotary drive unit attached to the bottom support plate. The top support plate is fixed vertically and the bottom spring-loaded support plate is mounted on springs that maintain pressure on the variable volume separation chamber and allow the bottom support plate to move vertically.

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